Based Upon: PCT/EP03/05493

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A cooking system ~~based on the principle of~~ using heat conduction and ~~comprised of~~ having a one-piece cooking surface made of a glass-ceramic material and having at least one cooking zone[[,]] which can be individually directly heated by ~~means of~~ heating elements arranged on ~~the~~ an underside of ~~the~~ a glass-ceramic plate, the cooking system comprising:

~~characterized in that~~

the glass-ceramic plate ~~consists of~~ having main crystalline phases of one of ~~the~~ high quartz mixed crystal [[or]] and keatite mixed crystal type[[,]] mainly ~~constituted~~ formed of ~~the~~ components LiO_2- Al_2O_3-SiO_2[[,]] with a coefficient of expansion of $\alpha = 0$ to 1.8×10^{-6}/K and a heat conductivity of < 3 W/mK, and ~~has~~ having at least one cooking zone on the underside,

the heating elements (30) of the cooking zone ~~consist of~~ having metallic layers, and

between the underside (11) of the glass-ceramic plate (10) a porous ceramic layer [[is]] arranged as ~~the~~ an electrical insulating layer (20).

2. (Currently Amended) The cooking system in accordance with claim 1, wherein ~~characterized in that~~ the coefficient of expansion $\alpha = 0$ to 1.5 10^{-6}/K.

3. (Currently Amended) The cooking system in accordance with ~~claims 1 or~~ claim 2, wherein ~~characterized in that~~ the heat conductivity ~~assumes~~ has a value < 2.7 W/mK.

4. (Currently Amended) The cooking system in accordance with ~~claims 1 or~~ claim 2, wherein ~~characterized in that~~ during a cooking operation at [[T -]] 550°C[[,]] the cooking zone shows arching in [[the]] a diagonal direction < 0.2 mm.

5. (Currently Amended) The cooking system in accordance with ~~claims 1 to~~ claim 4, wherein ~~characterized in that~~ the heating elements (30) are applied by ~~means of~~ thermal spray methods, ~~in particular~~ including one of atmospheric plasma spray methods [[or]] and cold gas spray methods of one of NiCr base alloys, NiAl base alloys, CrFeAl base alloys [[or]] and oxidation-resistant cermets, ~~such as~~ including Cr_3C_2-NiCr or WC-CoCr.

6. (Currently Amended) The cooking system in accordance with ~~claims 1 to~~ claim 4, wherein ~~characterized in that~~ the heating elements (30) are applied by ~~means of~~ screen printing methods from Ag/Pd-containing pastes with a glass frit.

7. (Currently Amended) The cooking system in accordance with claim ~~one of claims 1 to~~ 6, wherein ~~characterized in that~~ the ceramic layer used as an insulating layer (20) is ~~consists~~ of one of Al_2O_3, mullite, cordierite, circonium silicate [[or]] and SiO_2/TiO_2.

8. (Currently Amended) The cooking system in accordance with claim ~~one of claims 1 to~~ 7, wherein ~~characterized in that~~ the insulating layer (20) is bonded to the underside [[(12)]] (11) of the glass-ceramic plate (10) by ~~means of~~ thin strips (21) of primary ceramic particles of a width of approximately 50 to 150 nm.

9. (Currently Amended) The cooking system in accordance with ~~one of claims 1 to~~ claim 8, wherein ~~characterized in that~~ the heating elements (30) are covered by ~~means of~~ a thermal insulating layer (40) of silicate fiber materials.

10. (Currently Amended) The cooking system in accordance with ~~one of claims 1 to~~ claim 9, wherein ~~characterized in that~~ the glass-ceramic plate (10) has a specific resistance > 10^5 Ω, and the ~~entire~~ cooking system has a breakdown resistance of > 3750 V, ~~while in accordance with the standard 60335-1 the~~ and a leakage current is < 0.25 mA per cooking zone.

11. (New) The cooking system in accordance with claim 1, wherein the heat conductivity has a value < 2.7 W/mK.

12. (New) The cooking system in accordance with claim 1, wherein during a cooking operation at 550°C the cooking zone shows arching in a diagonal direction < 0.2 mm.

13. (New) The cooking system in accordance with claim 1, wherein the heating elements (30) are applied by thermal spray methods, including one of atmospheric plasma spray methods and cold gas spray methods of one of NiCr base alloys, NiAl base alloys, CrFeAl base alloys and oxidation-resistant cermets, including Cr_3C_2-NiCr or WC-CoCr.

14. (New) The cooking system in accordance with claim 1, wherein the heating elements (30) are applied by screen printing methods from Ag/Pd-containing pastes with a glass frit.

15. (New) The cooking system in accordance with claim 1, wherein the ceramic layer used as an insulating layer (20) is of one of Al_2O_3, mullite, cordierite, circonium silicate and SiO_2/TiO_2.

16. (New) The cooking system in accordance with claim 1, wherein the insulating layer (20) is bonded to the underside (11) of the glass-ceramic plate (10) by thin strips (21) of primary ceramic particles of a width of approximately 50 to 150 nm.

17. (New) The cooking system in accordance with claim 1, wherein the heating elements (30) are covered by a thermal insulating layer (40) of silicate fiber materials.

18. (New) The cooking system in accordance with claim 1, wherein the glass-ceramic plate (10) has a specific resistance > 10^5 Ω, and the cooking system has a breakdown resistance of > 3750 V, and a leakage current is < 0.25 mA per cooking zone.